UNITED STATES DISTRICT COURT MIDDLE DISTRICT OF TENNESSEE **NASHVILLE DIVISION**

IN RE: REALPAGE, INC., RENTAL) SOFTWARE ANTITRUST LITIGATION) (NO. II))	Case No. 3:23-md-3071 MDL No. 3071		
(NO. II)	This Document Relates to:		
)))	ALL CASES		

JOINT ELECTRONICALLY STORED INFORMATION ORDER

1. **General Provisions.**

- **Applicability**: This Protocol Order will govern the production of Electronically (a) Stored Information ("ESI") and paper documents. To the extent that a Party (as defined infra) collected and processed documents prior to the entry of this ESI Protocol Order, and production of such documents cannot be made in accordance with the terms of this ESI Protocol Order, the Parties will meet and confer concerning the formats of the production of any such documents. This Order shall apply to all current Parties to the above-captioned action, as well as any case that may later be consolidated with this case.
- (b) Costs: Generally, the costs of producing documents pursuant to this Order shall be borne by each producing Party. Any producing Party who produces documents in TIFF format shall do so at their sole cost and expense, and such producing Party hereby waives the right to seek reimbursement for such costs pursuant to 28 U.S.C. §1920, or any other state or federal cost recovery provision or court order.

2. Definitions.

- "Plaintiffs" as used herein shall mean the individual class representatives Plaintiffs (a) named in the Second Amended Consolidated Class Action Complaint.
- "Defendants" as used herein shall mean Defendants named in the Second (b) Amended Consolidated Class Action Complaint.

- (c) "Party" or "Parties" as used herein shall mean either or both Plaintiffs and Defendants, as well as their officers, directors, employees, agents, and legal counsel. A single Plaintiff or Defendant, as well as, where applicable, its respective officers, directors, employees, agents, and legal counsel, may also be referred to as a "Party" solely for the purposes of this ESI Protocol Order.
- (d) To avoid misunderstandings regarding terms not specifically defined herein, all Parties should consult the most current edition of The Sedona Conference Glossary.
- 3. Discovery Liaisons.
- (a) **Designation:** Each Party agrees to designate a Discovery Liaison within 14 days after entry of this ESI Protocol Order. Notice of which must be filed with the Court. Any Party is free to change its designated Discovery Liaison by providing written notice to the other Parties and the Court.
- (b) **Duties of Discovery Liaison:** Each Discovery Liaison will be prepared to participate in the resolution of any e-discovery disputes or ESI issues that may arise (or designate another person as primarily responsible) and have access to personnel most knowledgeable about the Party's electronic systems and capabilities in order to, as appropriate, answer pertinent questions.
- 4. Cooperation. The parties agree to engage in on-going good faith meet and confer discussions on ESI as necessary, and the parties understand that such meet and confer is a prerequisite to seeking the Court's assistance.
- 5. Preservation. A party has an obligation to take reasonable and proportional steps to preserve discoverable ESI in the party's possession, custody or control. The producing party is best situated to evaluate and implement the methods and protocols appropriate for preserving its own ESI. To the extent that a party reasonably believes that it would be unduly burdensome or disproportionate to the needs of the case to preserve ESI or Documents that may be relevant to the claims and defenses in the litigation, the Parties will meet and confer regarding the scope of preservation, including custodians, data sources, date ranges, and categories of information that have been or should be preserved in connection with this Litigation. This paragraph shall not be interpreted as, or considered to be, a preservation order, but rather a recognition of each party's duty to preserve relevant evidence.
 - (a) Notwithstanding the following categories of ESI do not automatically have to be preserved:
 - i) Unit pricing, availability, and/or quality data shown on an owner, owner-operator, or property manager defendant's website or mobile application whose preservation requires modification of the procedures used by the producing party in the ordinary course of business to back up and archive data, provided that such data is available in substantially the same form or in another structured data form; and

- ii) Legacy or back-up data that is not used in the regular course of business and that would require extraordinary affirmative measures to preserve. "Legacy or back-up data" shall mean data that is not accessed in the regular course of business and that cannot be accessed in the regular course of business without significant time and expense, including, by way of example, tape backup systems, decommissioned servers, and off-site back-up systems.
- (b) If a dispute arises regarding the scope of a party's obligation to preserve ESI, any party may seek a ruling from the Court on the issue. If appropriate, the Court may require a party who has made an overbroad or disproportionate preservation demand to bear some or all of the producing party's expenses in preserving the disputed ESI.
- 6. Collection. The producing Party is in the best position to determine the method by which it will collect ESI. Parties need not collect ESI before they have conferred regarding the form of production at the Rule 26(f) conference. To the extent the Parties have a dispute regarding the method of collection, the Parties should be prepared to submit promptly such a dispute to the Court for resolution.
- 7. Search and Review. ESI searches and review shall be done using methods and protocols selected by the producing Party, after meeting and conferring with the receiving Party, in a manner that is reasonable and likely to locate relevant ESI. The parties agree to meet and confer in good faith, to provide transparency on the methodologies proposed to be used (including proposed search terms per ¶ 8), and to take into account proportionality and undue burden under Fed. R. Civ. P. 26. To the extent the Parties have a dispute regarding use of search and review methodologies, the Parties should be prepared to submit promptly such a dispute to the Court for resolution.
 - (a) Additional Data Custodians and/or Sources. At any time after the Parties identify initial document custodians but before 90 days prior to the close of discovery, if a requesting Party believes that additional document custodians and/or sources should be added, then the requesting Party shall advise the producing Party in writing of the proposed additional document custodians and/or sources and the basis for the request. The requesting Party will consolidate all requests into a single request to the producing Party. If the requesting Party believes that it has good cause to make an additional request for additional custodians beyond those in its consolidated request, the requesting Party and the producing Party shall meet and confer about the relevance, proportionality, and burden of the second request. The Parties will meet and confer about the proposed additional custodians and/or sources. To the extent the Parties have a dispute regarding additional custodians and/or sources, the Parties should be prepared to submit such a dispute promptly to the Court for resolution.
 - (b) To the extent that a producing Party seeks to use any advanced technological solutions to remove predicted non-responsive documents from human analysis (i.e.,

Technology Assisted Review ("TAR") or Artificial Intelligence ("AI")), the Party shall meet and confer with the receiving Party on the parameters of the proposed usage. To the extent the Parties have a dispute regarding use of TAR or AI, the Parties should be prepared to submit promptly such a dispute to the Court for resolution. Any agreed usage of TAR or AI must also be submitted to the Court for approval before such technology is deployed. For the sake of efficiency, the Parties may agree on a standard TAR or AI review protocol that any producing Party may implement, subject to the Court's approval of the protocol.

(c) Reasonable Inquiry: Nothing in this ESI Protocol is intended to relieve any party from its obligation to conduct a reasonably inquiry to identify and produce responsive documents. The Parties acknowledge that electronic search methodologies may be used to conduct a reasonable inquiry for responsive discoverable material. A producing Party will also produce known responsive, not privileged, and proportional ESI even if not captured or identified by a separate electronic search methodology.

8. Search Terms.

- (a) **Cooperative Process.** The Parties shall cooperate in regard to search term discussions, which may include iterations of testing proposed search terms.
- (b) **Use of Search Terms.** The Parties agree to test the corpus of documents not captured by the proposed search terms to assess the quantity and quality of the information being excluded from any scope of potential review or production.
- (c) Search Term Disclosure. The producing Party will disclose the search terms used to identify potentially responsive documents and disclose any search software they have decided to use (including version number) and use best efforts to disclose information regarding what stop words have been excluded from the index if different from the default stop words for the software. If a producing Party elects to use any search platform other than Relativity, dtSearch, DISCO, or Everlaw, the producing Party will, upon request, provide the requesting Party with reasonably available search guides and identify any stop words in use.
- (d) **Proportionality of Search Term Requests.** The requesting Party shall work in good faith to apply proportionality in its search term requests. When the requesting Party seeks requests that the producing Party use additional search terms, it must request search terms that are related to the claims and defenses in the litigation.
- (e) **Production of Exemplars.** Where a producing Party seeks to exclude false positives (aka, "noise hits") by modifying or excluding certain keywords, then it will supply some contextual examples of such false positives or other information to help demonstrate why they must be modified or excluded. Such examples may be provided by a description of the exemplars or the nature of the "false positive."

(f) Initial Search Term Proposals:

(i) Timing: Promptly after a producing Party completes their negotiations on the requesting party's initial request for production, the producing Party will

- propose a set of search terms and disclose whether the producing Party intends to use different search terms with different document custodians or sources. The producing Party's proposal will include, to the extent known, semantic synonyms and common variant spellings of the keywords proposed.
- (ii) Requesting Party's Proposed Revisions: The requesting Party will provide any proposed revisions to the producing Party's search terms and an explanation for such proposed revisions within 14 days.
- Producing Party Provides Information Sufficient to Support Its (iii) **Objections**: Within 14 days thereafter, the producing Party will provide information sufficient to support its objections to specific search terms.
- Cooperation: Parties agree to work together in good faith to reasonably (iv) increase the number of relevant documents returned and narrow the number of irrelevant documents captured as a result of the search terms. To the extent any disputes remain concerning the sufficiency of the producing Party's information in support of its objections and/or the use of specific search terms after good faith negotiations have occurred, the parties may raise the issue with the Court.
- Further Search Term Proposals: At any time after the Parties address the (g) producing Party's initial search terms, but at least 90 days before the close of discovery, if a requesting Party believes that additional search terms should be added, then the requesting Party shall advise the producing Party in writing of the proposed additional search terms and the basis for the request. The requesting Party will consolidate all requests into a single request. If the requesting Party believes that it has good cause to make an additional request for additional search terms beyond those in its consolidated request, the requesting Party and the producing Party shall meet and confer about the relevance, proportionality, and burden of the second request. The Parties will meet and confer about the proposed additional custodians and/or sources. To the extent the Parties have a dispute regarding additional search terms, the Parties should be prepared to submit such a dispute promptly to the Court for resolution.
- 9. **Form of Production.** ESI shall be produced in a form or forms that is reasonably usable and proportionate, considering such factors as the cost of the form(s) of production and the volume of ESI at issue.
 - Unless otherwise stated, the following format requirements apply to all paper (a) documents and ESI produced in this litigation. If a Party intends to produce documents or ESI in an alternative format, the producing Party shall inform the requesting Party of the format in which those documents or ESI will be produced in advance of producing those documents or ESI along with an explanation of why an alternative format is necessary. If necessary, the parties shall meet and confer and, if the dispute is not resolved within 14 days, the producing Party may seek relief from the Court.

- (b) Except for structured data, and unless otherwise specified herein, all production images will be provided as a black-and-white, single-page Group IV TIFF of at least 300 DPI resolution with corresponding multi-page text and necessary load files. Each image will have a file name that is the unique Bates number of that image. Original document orientation should be maintained to the extent reasonably practicable and technologically possible (i.e., portrait to portrait and landscape to landscape). Produced TIFF images will show all text and images that are visible in the form in which the electronic document was last saved, with the exception of redacted portions. Hidden content, tracked changes, edits, comments, notes, and other similar information viewable within the native file shall be imaged so that this information is captured on the produced image file. Documents containing redactions, whether or not they are otherwise required to be produced in native format, may be produced in TIFF format to preserve redactions.
 - (i) If ESI responsive to discovery requests is located in structured data sources, the parties shall meet and confer regarding the production format, content, and scope of structured data to be produced.
- (c) Color: Paper documents or ESI containing color, other than those being produced in native format, need not be produced initially in color. A receiving Party retains the right to request production of any document in its original colors. For such documents, the requesting Party shall provide a list of Bates numbers of the documents sought to be produced in color for the producing Party's consideration. The production of documents and/or ESI in color shall be made in single-page JPG format (300 DPI) with JPG compression set to its highest-quality setting so as not to not degrade the original image. The producing Party retains the right to object to overbroad requests for the production of color documents on the basis of undue burden and lack of proportionality. The Parties agree to meet and confer about any such objections in good faith.
- (d) Format of Native Production: In addition to the ESI identified below in subparagraphs 9(d)(i) and 9(d)(ii), documents that are difficult to render in TIFF because of technical issues, or any other documents that are impracticable to render in TIFF format, may be produced in their native format. Documents produced natively shall be accompanied by a placeholder TIFF image stating "Document Produced Natively." The corresponding load file shall include NativeFileLink information for each native file that is produced. A producing Party retains the option to produce ESI in alternative formats if so agreed by the requesting Party, which may include native format, or a combination of native and TIFF formats. Similarly, a receiving Party retains the right to request production of a document in its native format, and shall provide the basis for an such request for the producing Party's consideration. The Parties agree to meet and confer prior to production of any native files other than those enumerated below.
 - (i) The following file types shall be produced in native format in lieu of TIFF format:

- Spreadsheet application files, such as Microsoft Excel files;
- Presentation files, such as Microsoft PowerPoint files;
- Database files, such as Microsoft Access files, except for structured data; and
- Multimedia audio/visual files, such as audio and video recordings (e.g., .wav, .mpeg, and .avi).
- (ii) The Parties recognize that certain types of documents, such as emails with embedded objects and Microsoft Word documents, may appear differently in TIFF format than in native format. The Parties agree to use their best efforts to ensure that these documents, when produced in TIFF format, are legible and retain readability (*i.e.* that embedded images and comments are viewable in TIFF format). After receipt of the producing Party's document production, the receiving Party may request that the following documents be produced in native format in addition to TIFF format:
 - Emails with embedded objects (*i.e.* screenshots, spreadsheets, or other images)¹, which shall additionally be produced as native .msg files along with color JPG images; and
 - Microsoft Word documents that include comments or track changes.

For such documents, the requesting Party shall provide a list of Bates numbers of the documents sought to be produced in native format for the producing Party's consideration. The producing Party retains the right to object to overbroad requests for the reproduction of native format documents on the basis of undue burden and lack of proportionality. The Parties agree to meet and confer about any such objections in good faith.

- (e) Continued Preservation of Native Copies of Documents: Through the pendency of the Litigation, the producing Party shall exercise reasonable, good faith efforts to maintain all preserved and produced native files in a manner that does not materially alter or modify the file or the metadata.
- (f) Compressed Files: Compression file types (i.e., .CAB, .GZ, .TAR, .Z, and .ZIP) shall be decompressed in a reiterative manner to ensure that a zip within a zip is decompressed into the lowest possible compression resulting in individual folders and/or files.
- (g) **Password-Protected, Encrypted, or Proprietary-Software Files:** With respect to any ESI that are password-protected or encrypted within the scope of review, the

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¹ For purposes of this subparagraph, embedded objects do not include email signatures, logos, emblems or other non-substantive images that may be included in emails.

producing Party will take reasonable steps based on industry standards to break the protection so that the documents can be reviewed and produced if appropriate. In the event that encrypted or password-protected documents, which are reasonably likely to be responsive to a document request, remain for a particular custodian after such reasonable efforts have been made, the producing Party shall advise the requesting Party. The Parties shall meet and confer regarding ESI that cannot be reviewed because proprietary software is necessary to view the ESI.

- (h) SMS, text, or other internet or mobile application messaging: If a Party is producing SMS, internet-based message or instant message conversation (including but not limited to texts from platforms such as iMessage, Slack, Jabber, and WhatsApp), such messages should be produced in an aggregated format in order to preserve the integrity of the threads of communication reflected in the messages, such that sufficient context for the responsive portion of the message thread is produced. Such threads shall be produced in a manner that includes all messages for at least a 24 hour period, time stamps for each individual message, recipient and sender information, and the relevant message type or application used. The threads shall be produced in a manner that includes any transmitted attachments, emojis, embedded images or other media files. The parties shall meet and confer about the proper format for the production of SMS, text, or other internet or mobile application messages.
- (i) Parent-child relationships: Parent-child relationships (the association between an attachment and its parent document) that have been maintained in the ordinary course of business should be preserved to the extent reasonably practicable. Entire document families must be produced, even if only the parent email or an attachment to an email is responsive, except for those documents identified below in subparagraph 9(h)(iii). Each document shall be produced with the production number for the first and last page of that document in the "BegBates" and "EndBates" fields of the data load file and with the "BegAttach" and "EndAttach" fields listing the production number for the first and last page in the document family.
 - (i) If a Party is producing a hard copy printout of an email with its attachments, the attachments should be processed in order behind the e-mail to the extent that is how the hard copy is maintained in the ordinary course of business.
 - (ii) To the extent an attachment contains privileged information in whole or in part, a producing Party need not produce the privileged contents of the attachment, even where an email parent is being produced in whole or in part, and shall state the basis for its redaction or withholding on a privilege log; and a producing party need not produce an attachment that is a junk file or non-user-created content routinely excluded during processing without logging that exclusion.
- Production deliverables shall include both a metadata (.dat) file and an an image (i) cross-reference load file (.opt). The .dat file shall contain all fielded data at the

document level for the production, including the beginning bates number for each record, the relative path to the text files for each record, and, for native files, the relative path to the native file for each record. The .dat file shall include all metadata fields identified in Appendix A. To the extent that metadata does not exist or is not reasonably accessible or available for any documents produced, nothing in this order shall require any Party to extract, capture, collect or produce such metadata. The .opt file shall provide image cross reference information for TIFF images (including native placeholders and placeholder documents for family members withheld for privilege or work-product protection) and shall identify unitization information. The total number of documents referenced in a production's data load file should match the total number of designated document breaks in the image load files in the production.

- All native format files shall be produced in a folder named "NATIVE," (i)
- All TIFF images shall be produced in a folder named "IMAGE," which (ii) shall contain sub-folders named "0001," "0002," etc. Each sub-folder shall contain no more than 10,000 images. Images from a single document shall not span multiple sub-folders.
- (iii) All extracted Text and OCR files shall be produced in a folder named "TEXT."
- (iv) All load files shall be produced in a folder named "DATA" or at the root directory of the production media.
- (k) Each ESI item or paper document produced under this ESI Protocol, whether produced in native format or as a TIFF image, shall be accompanied by an extracted text file (for ESI) or OCR text file (for paper documents and redacted documents) in the text directory and provided in a "text" folder on the production media as specified below. All text files shall be provided as a single document level text file for each item, not one text file per page.
 - (i) For paper documents, where OCR is used, the producing Party will utilize industry standard OCR processes and technology; however, the producing party is not certifying that the accompanying text file is accurate or reliable for searching purposes beyond the application of the underlying OCR technology. OCR text files should indicate page breaks where practicable.
 - (ii) Except for redacted documents, emails and other ESI will be accompanied by a text file with text extracted directly from the native electronic file.
 - (iii) For TIFFs, the file name of each extracted text or OCR file should be identical to that of the Bates number of the first image page of its corresponding document, followed by .txt. For native documents, the file name of each extracted text file should be identical to that of the Bates number assigned to the corresponding native document.

- (iv) Extracted text/OCR text files should be provided in a "Text" folder on the provided media.
- (l) **Personal Data Redactions:** A producing Party may redact personal information to the extent that the information falls within one of the following categories and such redactions should be identified as "Redacted Personal Data" on the document:
 - (i) the information relates to medical or health issues of an individual;
 - (ii) social security numbers, bank account information, or personal passcodes; or
 - (iii) personal contact information of non-relevant third parties (such as friends or family that do not work in the multifamily housing industry).
- (m) **Production Media & Protocol:** A producing Party may produce documents via email, readily accessible computer or electronic media (including, e.g., CD-ROM, DVD, or external hard drive with standard PC compatible interface) ("Production Media"), or via file-sharing service (including any network-based secure file transfer mechanism or SFTP). Any requesting Party that is unable to resolve any technical issues with the electronic production method used for a particular production may request that a producing Party provide a copy of that production using Production Media. The producing Party may encrypt Production Media, and will provide a decryption key to the requesting Party in a communication separate from the production itself.
- (n) If ESI that has been previously produced in another litigation or proceeding is responsive to discovery requests, a Party may reproduce that prior production as it exists without modification. The receiving Party retains all rights to request native versions of any produced document consistent with the parameters in this Order, or to request reproduction of any documents that have processing issues.

10. Paper Document Unitization.

Paper documents should be logically unitized for production to the extent reasonably practicable. Generally, when scanning paper documents for production, distinct documents shall not be merged into a single record and single documents shall not be split into multiple records. The Parties will make reasonable efforts to unitize documents correctly.

- (a) **Relationship:** The relationship among the documents in a folder or other grouping should be reflected in proper coding of the beginning and ending document and attachment fields to the extent reasonably practicable.
- (b) **Identification:** Where a document, or a document group such as folder, clipped bundle, or binder has an identification spine or other label, the information on the label shall be scanned and produced as the first page of the document or grouping.

11. Bates Numbering

- (i) All images must be assigned a Bates number that must always: (1) be unique across the entire document production; (2) maintain a constant prefix and length (ten-digits and 0-padded) across the entire production; (3) contain no special characters or embedded spaces, except hyphens or underscores; (4) be sequential within a given document; and (5) identify the producing Party. To the extent reasonably practicable, the Bates number must also maintain consistent numbering across a family of documents;
- (ii) If a Bates number or set of Bates numbers is skipped in a production, the producing Party will so note in a cover letter or production log accompanying the production;
- (iii) The producing Party will brand all TIFF images at a location that does not obliterate or obscure any part of the underlying images.

12. Confidentiality Designations.

If a particular paper document or ESI item qualifies for confidential treatment under the terms of a Protective Order entered by the Court in the Litigation or a confidentiality stipulation entered into by the Parties, the designation shall be branded on the document's image at a location that does not obliterate or obscure any part of the underlying images. This designation also should be included in the appropriate data field in the load file. For documents produced in native format with image placeholders, the placeholder image for the native file should be branded with the appropriate confidentiality designation to the extent possible. Requesting Parties shall ensure that the confidentiality claim follows the document regardless of whether the designation imprints on the file when viewed in printed form. Failure to comply with the procedures set forth in this ESI Protocol Order, any protective order or confidential order, or any confidential stipulation shall not waive any protection or confidential treatment.

13. Production Processing

(a) System Files: The parties shall use best efforts to exclude from ESI preservation and production those files in the standard list of such files maintained in the National Software Reference Library by the National Institute of Standards & Technology; temporary or ephemeral data; slack, fragmented, and unallocated data; duplicative back-up data; information from mobile devices that otherwise resides in other reasonably accessible data sources; online access data, such as temporary files, cache files, internet browsing histories, and cookies; systems and back-up files that are no longer in use and cannot be accessed without undue burden; ephemeral messaging systems that do not retain messages or data; and internet-based storage systems that are duplicative of other data sources. Other file types may be added to the list of excluded files if they do not have user-created content upon agreement of the Parties.

(b) Metadata fields and processing:

- (i) Time Zone: ESI items shall be processed using a reasonable time zone for each Party and supplying the appropriate Time Zone offset and original Time Zone information as a part of the metadata.
- (ii) Auto Date/Time Stamps: ESI items shall be processed so as to preserve: (1) the date and time when the document was created; and (2) the date and time when the document was last saved, updated, and/or modified, not the date of collection or processing, to the extent reasonably feasible.
- (c) **Hidden Text:** ESI items shall be processed in a manner that preserves hidden columns or rows, hidden text, worksheets, speaker notes, tracked changes, and comments.

(d) Thread Suppression:

- (i) Threads are communications that contain prior or lesser-inclusive communications that also may exist separately in the party's electronic files. A most inclusive thread is one that contains all of the prior or lesser-inclusive communications, including attachments, for that branch of the thread.
- (ii) A party is permitted to produce only the most inclusive threads, or more inclusive threads (e.g. a thread containing all communications over a 24-hour period), as opposed to each individual communication.
- (iii) An email that includes content in the BCC or other blind copy field shall not be treated as an inclusive email in an email chain, it should not be suppressed even if all other content in the email is contained in another member of the email chain.
- **(iv)** Following production of any threads, a receiving party may make reasonable requests for production of individual lesser-inclusive communications. The producing party shall cooperate reasonably in responding to any such requests.
- (v) While a producing party may produce only the most inclusive thread, any party may submit a less inclusive email thread as an exhibit in any deposition, brief, or at trial, so long as the email thread starts from the initial email.

(e) Deduplication:

(i) A producing Party shall use reasonable efforts to deduplicate globally (i.e., across document custodians) and horizontally (i.e., within a custodial collection) at the "family" level (i.e., if there are identical child documents that have unique parents, they are not duplicates; an attachment to a document is not a duplicate of the same document maintained as a standalone document). To the extent practicable, all custodians who were

in possession of the deduplicated document shall be identified in the "All Custodian" metadata field of the copy of the single record that is produced. Multiple custodians in the "All Custodians" field shall be separated by semicolons. If processing and production is done on a rolling basis, an updated "All Custodians" field with additional values shall be provided in an overlay. In the event of rolling productions of documents or ESI items, the producing Party will, as needed and to the extent practicable, supplement the load files with updated All Custodian information, as well as BCC information to the extent such metadata exists. Duplicate custodian information may be provided by a metadata "overlay" and will be provided by a producing Party after the Party has substantially completed its production of ESI.

- (ii) An email that includes content in the BCC or other blind copy field shall not be treated as a duplicate of an email that does not include content in the BCC or other blind copy field, even if all remaining content in the email is identical.
- Duplicate electronic documents shall be identified by a commercially (iii) accepted industry standard (e.g., MD5 or SHA-1 hash values) for binary file content. All electronic documents bearing an identical hash value are a duplicate group. Any other methodology for identification of duplicates, including email field selection for hash value creation, must be disclosed to the requesting Party.

14. Privilege.

- (a) Except as provided otherwise below, for any responsive document withheld in its entirety or produced but redacted (for reasons other than the redaction of Personal Data pursuant to Section 8(1)), the producing Party will produce privilege/redaction logs in MS Excel format or any other format that permits electronic sorting and searching. Privilege logs must be produced on a rolling basis within 60 days of the production of respective redacted documents, and with all privilege log productions complete no later than 120 days before the close of discovery.
- (b) **Metadata Fields:** The Parties agree that the following list of metadata fields, if reasonably accessible and unnecessary to protect the privilege, will be produced in a privilege log:
 - (i) **BegBates**
 - **EndBates** (ii)
 - (iii) BegAttach
 - End Attach (iv)
 - (v) CustodianAll

- (vi) **Email Thread ID**
- (vii) Page Count
- (viii) Fingerprint (Hash Value)
- EmailSubject (ix)
- Date Sent **(x)**
- (xi) Time Sent
- Time Zone Used (xii)
- To/From/CC/BCC (xiii)
- (xiv) Doc Title
- Author (xv)
- (xvi) DocExt
- (xvii) Confidentiality
- (xviii) Production Volume
- Redacted (xix)
- (xx)Paper
- (c) Emails containing privileged information may be included in a privilege log as the most inclusive version of the email thread that is available, as long as there is a of privilege for the entirety of the email thread and attachments, otherwise, the emails shall be produced in redacted format. The Parties agree to meet and confer in good faith regarding any disagreement.

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- (d) Parties are not required to include on privilege logs any document generated after the filing of the initial complaint, created by outside counsel and concerning this litigation.
- (e) Parties are not required to include on privilege logs any document or communication, dated after the filing of the initial complaint, that is sent to or received from outside legal counsel.
- (f) A Party shall only be required to include one entry on the privilege log to identify each family of documents that are withheld in their entirety for privilege (parent and child[ren]) taken together ("Family"); provided, however, that the privilege log entry for any Family shall identify that the documents are part of a Family (e.g., "Email and attachments...") and provide the names and a brief description of the attachments in a separate field. If only a portion of a family of documents contains privileged information, the Family should be produced in redacted format. The Parties agree to meet and confer in good faith regarding any disagreement.
- (g) The Parties will discuss other categories of documents that may be excluded from the log, and will also discuss foregoing using traditional document-by-document logs in favor of alternate logging methods, such as including only information from particular metadata fields (e.g., author, recipient, date), only if such alternative logging mechanisms allow for sufficient identification of any claim of privilege to allow the receiving Party to assess and challenge any claim of privilege. Compliance with the logging provisions of this section shall not constitute a waiver of any privilege or protection.

- (h) If the items redacted and partially withheld from production are audio/visual files, the producing Party shall, to the extent reasonably practicable, provide the unredacted portions of the content. If the content is a voice recording, the Parties shall meet and confer to discuss the appropriate manner for the producing Party to produce the relevant and discoverable portion of the content.
- (i) No provision of this Order limits the authority of the Court to issue a non-waiver order on other terms and conditions pursuant to Fed. R. Evid. 502(d).

15. Miscellaneous Provisions.

- (a) Inaccessible ESI: If a producing Party asserts that certain categories of ESI that are reasonably likely to contain responsive information are inaccessible or otherwise unnecessary under the circumstances, or if the requesting Party asserts that, following production, certain ESI is not reasonably usable, the Parties shall meet and confer with their respective technology experts to discuss resolving such assertions. If the Parties cannot resolve any such disputes after such a meet and confer has taken place, the issue shall be presented to the Court for resolution.
- (b) Variations or Modifications: Variations from this ESI Protocol Order may be required. Any practice or procedure set forth herein may be varied by agreement of all affected Plaintiffs and all affected Defendants, which will be confirmed in writing. In the event a producing Party determines that a variation or modification is appropriate or necessary to facilitate the timely and economical production of documents or ESI, the producing Party will notify the requesting Party of the variation or modification. Upon request by the requesting Party, those Parties will meet and confer to address any issues in a reasonable and timely manner prior to seeking Court intervention.

IT IS SO ORDERED.

WAVERLY D. CRENSHAW, JR.

CHIEF UNITED STATES DISTRICT JUDGE

Appendix A: ESI Metadata and Coding Fields

Field	Description	Email	Non-Email ESI	Scanned Hard Copy
BegBates	Beginning page Bates number	X	X	X
EndBates	Ending page Bates number	X	X	X
BegAttach ²	Beginning page of the first document within a family populated for all documents in that family, including parent and attachments.	X	X	X
EndAttach	Ending page of attachment range	X	X	X
AttachCount	Number of attachments to an email	X	X	
AllCustodian	Production custodians or non- human production data sources associated with the produced document	X	X	X
Custodian	Production custodian from or non-human production data source from which produced file was taken	X	X	X
FileName	File name of document	X	X	
FileExt	File extension of document	X	X	
FileSize	The original file size of the produced document	X	X	
PageCount	For documents produced in TIFF form, number of pages in the document. For documents produced in native, page count will be 1 (for placeholder).	X	X	X
DocTitle	File name of the non-email document		X	_
EmailSubject	Subject of email	X		
Author	Document author		X	
From	Email, chat, or message author	X	X	

² Field names can vary from system to system and even between different versions of systems. Thus, Parties are to be guided by these Field Names and Field Descriptions when identifying the metadata fields to be produced for a given document pursuant to this ESI Protocol.

Field	Description	Email	Non-Email ESI	Scanned Hard Copy
То	Email, chat, or message recipients	X	X	
CC	Email copies	X		
BCC	Email blind copies	X		
Importance	Email importance flag	X		
DateSent	Date sent (mm/dd/yyyy format)	X		
TimeSent	Time sent (hh:mm:ss format)	X		
DateRec	Date received (mm/dd/yyyy format)	X		
TimeRec	Time received (hh:mm:ss format)	X		
DateCreated	Date created	X	X	
TimeCreated	Time created (hh:mm:ss format)	X	X	
DateLastMod	Last modification date (mm/dd/yyyy format)	X	X	
TimeLastMod	Last modification time (hh:mm:ss format)	X	X	
HashValue	Unique electronic signature of email or electronic file	X	X	
EmailThreadFamID	Unique identifier from email threading algorithm to denote emails from a single thread and allattachments	X	X	
MSGID	Email: "Unique Message ID" field	X		
ProdVol	Production volume name (date of production not needed)	X	X	X
Confidentiality	Confidentiality designation pursuant to the Protective Order	X	X	X
TimeZoneOffset	The hour offset of the selected export time zone (as identified in the TimeZone field). If the document is an email, and that email has sent field metadata, the offset reflects any daylight savings time rules in effect at that sent time for the selected	X	X	

Field	Description	Email	Non-Email ESI	Scanned Hard Copy
	time zone. The offset is a whole number. For example, if the document was from US Central Time (CST), this field would show "-6."			
TextPath	Path to load extracted text (e.g., \\Prod001\Text\ABC00 0001.txt	X	X	X
NativePath	Path to native file (e.g., \\Prod001\Natives\ABC 0000001.xls	X	X	
Redacted	Descriptor for documents that have been redacted (<yes> or <no>)</no></yes>	X	X	X
Paper	Descriptor for whether original was paper document (<yes> or <no>)</no></yes>	X	X	X